

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1 1. (Currently amended) A method for assigning an identifier to a device
2 within a distributed computing system, wherein the identifier is unique across the
3 distributed computing system, comprising:
4 detecting the presence of the device within a local computer system that is
5 part of the distributed computing system; and
6 if an identifier has not been assigned to the device, assigning an identifier
7 to the device by,
8 attempting to retrieve the identifier from a local pool of
9 device identifiers within the local computer system,
10 if the local pool is empty, retrieving at least one additional
11 identifier for the local pool from a global allocator for device
12 identifiers located within the distributed computing system,
13 wherein retrieving at least one additional identifier from the global
14 allocator involves retrieving a block of identifiers for the local pool
15 from the global allocator,
16 wherein if the global allocator is inaccessible, retrieving at
17 least one additional identifier from the global allocator involves
18 assigning a provisional identifier from the local computer system,
19 and wherein if the global allocator later becomes accessible, the
20 method further comprises:

21 communicating the provisional identifier to
22 the global allocator,
23 if the global allocator approves the
24 provisional identifier, recording the provisional
25 identifier as a permanent device identifier, and
26 if the global allocator rejects the provisional
27 identifier, assigning a new identifier from the global
28 allocator to the device, and
29 assigning the retrieved identifier to the device so that the
30 identifier can be used to reference the device.

1 2. (Original) The method of claim 1, wherein the identifier includes a
2 device major number that specifies a device driver to be used to access the device,
3 and a device minor number that identifies the device to be accessed by the device
4 driver, wherein the device minor number includes an instance number that
5 uniquely identifies an instance of the device, and a unit number that identifies an
6 independently addressable sub-unit within the device.

1 3. (Original) The method of claim 2, wherein attempting to retrieve the
2 identifier from the local pool includes attempting to retrieve the instance number
3 from the local pool, wherein the instance number is combined with the device
4 major number and the unit number to produce the identifier.

1 4-6. (Canceled).

1 7. (Original) The method of claim 1, wherein the device can include:
2 a disk drive;
3 a tape drive;

4 an I/O device; and
5 a networking device.

1 8. (Currently amended) A computer-readable storage medium storing
2 instructions that when executed by a computer cause the computer to perform a
3 method for assigning an identifier to a device within a distributed computing
4 system, wherein the identifier is unique across the distributed computing system,
5 the method comprising:

6 detecting the presence of the device within a local computer system that is
7 part of the distributed computing system; and

8 if an identifier has not been assigned to the device, assigning an identifier
9 to the device by,

10 attempting to retrieve the identifier from a local pool of
11 device identifiers within the local computer system,

12 if the local pool is empty, retrieving at least one additional
13 identifier for the local pool from a global allocator for device
14 identifiers located within the distributed computing system,
15 wherein retrieving at least one additional identifier from the global
16 allocator involves retrieving a block of identifiers for the local pool
17 from the global allocator

18 wherein if the global allocator is inaccessible, retrieving at
19 least one additional identifier from the global allocator involves
20 assigning a provisional identifier from the local computer system,
21 and wherein if the global allocator later becomes accessible, the
22 method further comprises:

23 communicating the provisional identifier to
24 the global allocator.

25 if the global allocator approves the
26 provisional identifier, recording the provisional
27 identifier as a permanent device identifier, and
28 if the global allocator rejects the provisional
29 identifier, assigning a new identifier from the global
30 allocator to the device., and
31 assigning the retrieved identifier to the device so that the
32 identifier can be used to reference the device.

1 9. (Original) The computer-readable storage medium of claim 8, wherein
2 the identifier includes a device major number that specifies a device driver to be
3 used to access the device, and a device minor number that identifies the device to
4 be accessed by the device driver, wherein the device minor number includes an
5 instance number that uniquely identifies an instance of the device, and a unit
6 number that identifies an independently addressable sub-unit within the device.

1 10. (Original) The computer-readable storage medium of claim 9, wherein
2 attempting to retrieve the identifier from the local pool includes attempting to
3 retrieve the instance number from the local pool, wherein the instance number is
4 combined with the device major number and the unit number to produce the
5 identifier.

1 11-13. (Canceled).

1 14. (Original) The computer-readable storage medium of claim 8, wherein
2 the device can include:
3 a disk drive;
4 a tape drive;

5 an I/O device; and
6 a networking device.

1 15. (Currently amended) An apparatus that facilitates assigning an
2 identifier to a device within a distributed computing system, wherein the identifier
3 is unique across the distributed computing system, comprising:

4 a detection mechanism that is configured to detect the presence of the
5 device within a local computer system that is part of the distributed computing
6 system; and

7 an assignment mechanism, wherein if an identifier has not been assigned
8 to the device, the assignment mechanism is configured to:

9 attempt to retrieve the identifier from a local pool of device
10 identifiers within the local computer system,

11 if the local pool is empty, to retrieve at least one additional
12 identifier for the local pool from a global allocator for device
13 identifiers located within the distributed computing system,
14 wherein in retrieving at least one additional identifier from the
15 global allocator, the assignment mechanism is configured to
16 retrieve a block of identifiers for the local pool from the global
17 allocator

18 wherein if the global allocator is inaccessible, retrieving at
19 least one additional identifier from the global allocator involves
20 assigning a provisional identifier from the local computer system,
21 and wherein if the global allocator later becomes accessible, the
22 method further comprises:

23 communicating the provisional identifier to
24 the global allocator,

25 if the global allocator approves the
26 provisional identifier, recording the provisional
27 identifier as a permanent device identifier, and
28 if the global allocator rejects the provisional
29 identifier, assigning a new identifier from the global
30 allocator to the device., and to
31 assign the retrieved identifier to the device so that the
32 identifier can be used to reference the device.

1 16. (Original) The apparatus of claim 15, wherein the identifier includes a
2 device major number that specifies a device driver to be used to access the device,
3 and a device minor number that identifies the device to be accessed by the device
4 driver, wherein the device minor number includes an instance number that
5 uniquely identifies an instance of the device, and a unit number that identifies an
6 independently addressable sub-unit within the device.

1 17. (Original) The apparatus of claim 16, wherein the assignment
2 mechanism is configured to attempt to retrieve the instance number from the local
3 pool, wherein the instance number is combined with the device major number and
4 the unit number to produce the identifier.

1 18-20. (Canceled).

1 21. (Original) The apparatus of claim 15, wherein the device can include:
2 a disk drive;
3 a tape drive;
4 an I/O device; and
5 a networking device.

1 22. (Canceled).